Supplemental Guide:
Family Medicine

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Milestones Supplemental Guide

This document provides additional guidance and examples for the Family Medicine Milestones. This is not designed to indicate any specific requirements for each level, but to provide insight into the thinking of the Milestone Work Group.

Included in this document is the intent of each Milestone and examples of what a Clinical Competency Committee (CCC) might expect to be observed/assessed at each level. Also included are suggested assessment models and tools for each subcompetency, references, and other useful information.

Review this guide with the CCC and faculty members. As the program develops a shared mental model of the Milestones, consider creating an individualized guide (Supplemental Guide Template available) with institution/program-specific examples, assessment tools used by the program, and curricular components. Curricular mapping was intentionally left blank, as it will vary from program to program and therefore could not be generalized in this document.

The assessment of a family medicine resident's clinical skills is an essential task for all programs. It should be noted that the Milestones do not include a subcompetency for these clinical skills to be reported to the ACGME. During development of the new Milestones, the clinical skills were considered to be the underpinning of each of the Patient Care subcompetencies and required in order to complete the stated tasks.

Additional tools and references, including the Milestones Guidebook, Clinical Competency Committee Guidebook, and Milestones Guidebook for Residents and Fellows, are available on the Resources page of the Milestones section of the ACGME website.

Patient Care 1: Care of the Acutely Ill Patient **Overall Intent:** To recognize, stabilize, and manage patients with acute and urgent needs across settings, including inpatient and outpatient	
Milestones	**Examples**
Level 1 *Generates differential diagnosis for acute presentations*	● Evaluates a patient with shortness of breath and lists common causes for the patient's dyspnea
Recognizes role of clinical protocols and guidelines in acute situations	● Recognizes that activation of the rapid response system is appropriate for a patient in acute respiratory distress
Recognizes that acute conditions have an impact beyond the immediate disease process	● Recognizes that being hospitalized for chronic obstructive pulmonary disease (COPD) may require discharge on home oxygen
Level 2 *Prioritizes the differential diagnosis for acute presentations*	● Evaluates a patient with acute shortness of breath and prioritizes the workup of most potentially serious causes of a patient's dyspnea like pulmonary embolism, pneumothorax, or myocardial infarction
Develops management plans for patients with common acute conditions	● After diagnosing a patient with COPD exacerbation, documents a management plan for a patient and writes appropriate orders
Identifies the interplay between psychosocial factors and acute illness	● When discharging a patient with a COPD exacerbation, considers potential financial implications to medication adherence for the inhalers prescribed
Level 3 *Promptly recognizes urgent and emergent situations and coordinates appropriate diagnostic strategies*	● After evaluating a patient in severe, acute respiratory distress, without prompting, initiates the rapid response system and leads urgent workup with tests like blood gas, electrocardiogram (EKG), and chest x-ray
Implements management plans for patients with complex acute conditions, including stabilizing acutely ill patients	● Balances need for high-dose steroids and elevated blood sugar in a patient with a COPD exacerbation, who also has uncontrolled diabetes and edema from poorly managed heart failure ● Identifies a patient in respiratory failure and makes an appropriate decision to provide assisted or mechanical ventilation.
Incorporates psychosocial factors into management plans of acute illness for patients and caregivers	● When discharging a patient with a COPD exacerbation, uses available resources such as hospital programs to obtain needed inhalers
Level 4 *Mobilizes the multidisciplinary team to manage care for simultaneous patient visits*	● While stabilizing patient with acute respiratory distress, initiates an appropriate diagnostic plan with a consideration for patient wishes, financial resources, and best practices for a new patient with acute chest pain

Independently coordinates care for acutely ill patients with complex comorbidities *Modifies management plans for acute illness based on complex psychosocial factors and patient preferences*	● Works with multi-disciplinary team and appropriate specialists if needed to manage intubation of COPD patient while addressing poorly controlled diabetes and renal failure ● Adjusts management plan of assisted respiration for a patient with severe COPD exacerbation based on advanced directives that requests no intubation negotiating with family the use of bi-level positive airway pressure (BIPAP) instead
Level 5 *Efficiently manages and coordinates the care of multiple patients with a range of severity, including life threatening conditions* *Directs the use of resources to manage a complex patient care environment or situation* *Implements strategies to address the psychosocial impacts of acute illness on populations*	● Independently manages a panel of multiple acute emergency room patients simultaneously ● Creates order set to direct care for activation of rapid response team for patients with acute respiratory distress ● Works with homeless shelter to negotiate for space of newly discharged patients outside of standard intake hours
Assessment Models or Tools	● Case-based discussions ● Direct observation ● Medical record (chart) audit ● Multisource feedback ● Precepting encounters ● Simulation
Curriculum Mapping	●
Notes or Resources	● Residents demonstrate use of clinical decision tools and point of care apps in making decisions for management of patients with acute conditions. Examples include Mediquations, Calculate by QxMD, MDCalc, MedCalX,

Patient Care 2: Care of Patients with Chronic Illness **Overall Intent:** To diagnose, manage, and coordinate care of patients with chronic illness in the context of a continuous relationship	
Milestones	**Examples**
Level 1 *Recognizes that common conditions may be chronic (e.g., anxiety, high blood pressure)* *Formulates a basic management plan that addresses a chronic illness* *Recognizes that chronic conditions have an impact beyond the disease process*	● Identifies that a 38-year-old male presenting to the office with an elevated blood pressure may have a diagnosis of essential hypertension ● Recommends that the patient take serial home blood pressure readings, follow a low sodium diet and return for repeat evaluation of the blood pressure ● Recognizes a patient with uncontrolled hypertension will not be able to maintain a commercial driver's license
Level 2 *Identifies variability in presentation and progression of chronic conditions* *Identifies and accesses appropriate clinical guidelines to develop and implement plans for management of chronic conditions* *Identifies the impact of chronic conditions on individual patients and the others involved in their care*	● Recognizes that a new onset headache may be a symptom of underlying hypertension ● Locates and reviews guidelines from appropriate agencies, such as the American College of Cardiology/American Heart Association, and initiates a first-line antihypertensive for the patient and schedules appropriate follow up after starting the medication ● Understands that hypertension will affect the patient and their caretaker/loved one's lifestyle, including the need to modify food choices, alcohol intake and activity levels
Level 3 *Determines the potential impact of comorbidities on disease progression* *Synthesizes a patient-centered management plan that acknowledges the relationship between comorbidities and disease progression* *Develops collaborative goals of care and engages the patient in self-management of chronic conditions*	● Screens for and addresses diabetes and dyslipidemia in the patient with hypertension ● In a patient with hypertension who is also found to have diabetes, sets up education on glucose control and adjusts the hypertensive regimen to include agents that provide renal protection ● Works with their patient to establish a weight loss goal for the next visit and offers realistic steps to engage the patient in self-management, noting the effects behavior change will have on their diabetes and hypertension
Level 4 *Balances the competing needs of patients' comorbidities*	● Adjusts medications and dosing regimens (i.e., stops metformin and an ACE-inhibitor) when a patient develops worsening chronic kidney disease without prompting. Independently demonstrates planning for future care plans with each patient who has a chronic illness

Applies experience with patients while incorporating evidence-based medicine in the management of patients with chronic conditions *Facilitates efforts at self-management of chronic conditions, including engagement of family and community resources*	● Explains to a patient and his or her caretakers the use of a basal/bolus insulin regimen, how to properly use an insulin pen and sliding scale, and informs the patient about local resources for medications and further education (e.g., health education website, social work, community centers)
Level 5 *Leads multidisciplinary initiatives to manage patient populations with chronic conditions and co-morbidities* *Initiates supplemental strategies (e.g., leads patient and family advisory councils, community health, practice innovation) to improve the care of patients with chronic conditions*	● A resident who knows a patient wants to be the best possible grandparent is able to use this information to provide motivation for behavioral change in the patient ● Participates in the development of a diabetes task force involving subspecialists and other health care professionals to meet the needs of their community ● Leads a patient and family advisory council to begin work to address the local food desert that exists in their community
Assessment Models or Tools	● Direct observation ● Medical record (chart) audit ● Multisource feedback ● Objective structured clinical examination ● Simulation
Curriculum Mapping	●
Notes or Resources	● Since the Agency for Healthcare Research and Quality ended the Guidelines Clearinghouse, other organizations have taken up the role of centralizing clinical guidelines to assist in the care of patients with chronic illness ● Guideline Central. Official Society Guidelines Tools. https://www.guidelinecentral.com/. 2019. ● Android/iOS Guideline Central app

Patient Care 3: Health Promotion and Wellness **Overall Intent:** To promote wellness and improve health throughout screening and prevention by partnering with the patient, family members, and community; understands concept of wellness and is able to promote in individual patients, their practice and their communities served	
Milestones	**Examples**
Level 1 *Identifies screening and prevention guidelines by various organizations* *Identifies opportunities to maintain and promote wellness in patients*	● Lists usual/most common sources of guidelines such as American Academy of Family Physicians (AAFP), US Preventive Services Task Force (USPSTF) during routine precepting encounters ● Administers an measles-mumps-rubella (MMR) vaccine prior to discharge in a recently postpartum rubella non-immune patient
Level 2 *Reconciles competing prevention guidelines to develop a plan for an individual patient, and considers how these guidelines apply to the patient population* *Recommends management plans to maintain and promote health*	● Discusses discrepant guidelines from different organizations to determine if breast cancer screening in a 50-year-old patient, without significant family history, should be done every one or two years ● Conducts a wellness visit for a patient and includes screening, immunizations, and lifestyle modification strategies that correlate with the patient's age and comorbidities
Level 3 *Identifies barriers and alternatives to preventive health tests, with the goal of shared decision making* *Implements plans to maintain and promote health, including addressing barriers*	● After seeing an insured patient with limited resources, and inability to secure transportation to and from appointments, patient agrees on fecal immunochemical testing as the preferred method for colon cancer screening
Level 4 *Incorporates screening and prevention guidelines in patient care outside of designated well visits* *Implements comprehensive plans to maintain and promote health, incorporating pertinent psychosocial factors and other determinants of health*	● Completes a chart audit on a panel of patients and identifies those needing a mammogram, and contacts patients and recommends screening ● Engages a dietician and community health worker to prevent weight gain in a patient who lives in a food desert and recently started taking antipsychotic medications
Level 5 *Participates in guideline development or implementation across a system of care or community*	● Participates on a committee that develops an influenza vaccination strategy for the health care system

Partners with the community to promote health	● Is a member of an advisory board working to improve school lunches at the local elementary school
Assessment Models or Tools	● Case-based discussion ● Direct observation ● Medical record (chart) audit ● Post precepting evaluations focused on prevention ● Simulation
Curriculum Mapping	●
Notes or Resources	● Agency for Healthcare Research and Quality. ePSS. https://epss.ahrq.gov/PDA/index.jsp. 2019. ● AAFP app with attention to Clinical Recommendations, Immunizations ● Centers for Disease Control and Prevention. Healthy Living. https://www.cdc.gov/healthyliving/index.html. 2019. ● Egger G, Binns A, Rossner S, Sagner M. *Lifestyle Medicine: Lifestyle, the Environment and Preventive Medicine in Health Disease*. 3rd ed. London, UK: Academic Press; 2017. https://books.google.com/books?id=29B1DQAAQBAJ&lpg=PP1&ots=mtPWLRCPBI&dq=preventive%20health%20care&lr&pg=PP1#v=onepage&q=preventive%20health%20care&f=false. 2019. ● Levine S, Malone E, Lekiachvili A, Briss P. Health Care Industry Insights: Why the Use of Preventive Services Is Still Low. *Prev Chronic Dis*. 2019;16:E30. doi:10.5888/pcd16.180625.

Patient Care 4: Ongoing Care of Patients with Undifferentiated Signs, Symptoms, or Health Concerns **Overall Intent:** To partner with the patient to address issues of ongoing signs, symptoms, or health concerns that remain over time without clear diagnosis despite evaluation and treatment, in patient-centered, cost-effective manner	
Milestones	**Examples**
Level 1 *Acknowledges the value of continuity in caring for patients with undifferentiated illness*	● Schedules a patient with a chronic cough for a return visit on their own schedule to continue the work-up
Level 2 *Accepts uncertainty and maintains continuity while managing patients with undifferentiated illness* *Develops a differential diagnosis for patients with undifferentiated illness*	● After initial evaluation of a patient with an unusual rash of unclear etiology, develops a diagnostic and treatment strategy with periodic follow up appointments to reassess and alters treatment if desired results do not occur ● Provides a thorough differential diagnosis of a patient presenting with a rash of unclear etiology including contact, infectious and autoimmune etiologies
Level 3 *Facilitates patients' understanding of their expected course and events that require physician notification* *Prioritizes cost-effective diagnostic testing and consultations that will change the management of undifferentiated illness*	● Explains to a patient with knee pain of unclear origin what the most likely diagnosis is and when under normal circumstances the pain would be expected to improve; advises that if the pain worsened, swelling increased, or the patient developed a fever, that he/she should seek medical attention ● Orders a plain film x-ray of a patient with unclear knee pain to make certain that a fracture is not present which could necessitate splinting or casting; does not immediately recommend an magnetic resonance image (MRI) or orthopedic referral
Level 4 *Coordinates collaborative treatment plans for patients with undifferentiated illness* *Uses multidisciplinary resources to assist patients with undifferentiated illness to deliver health care more efficiently*	● For a patient with renal issues that may have an underlying autoimmune component, prioritizes evaluation by a nephrologist and a rheumatologist and ensures that there is no duplication in testing between the specialists ● For patient with unclear symptoms that are affecting ability to work and that might have a psychosomatic origin, enlists the assistance of behavioral health and social work for assessment and facilitation of care
Level 5 *Coordinates expanded initiatives to facilitate care of patients with undifferentiated illness* *Contributes to the development of medical knowledge around undifferentiated illness*	● Works in conjunction with a clinical team to create an evaluation protocol for a constellation of symptoms/syndrome that has arisen in the local community ● Leads a research study related to a constellation of symptoms/syndrome and presents the study regionally/nationally or publishes the study in a peer-reviewed journal
Assessment Models or Tools	● Case-based discussions ● Direct observation ● Precepting encounters ● Simulation

Curriculum Mapping	●
Notes or Resources	● Edwards TM, Stern A, Clarke DD, Ivbijaro G, Kasney LM. The treatment of patients with medically unexplained symptoms in primary care: a review of the literature. *Mental Health Fam Med*. 2010;7(4):209-221. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3083260/. 2019. ● Madden S, Sim J. Acquiring a diagnosis of fibromyalgia syndrome: The sociology of diagnosis. *Social Theory Health*. 2016;14(1):88-108. doi:10.1057/sth.2015.7. ● Canovas L, Carrascosa AJ, Garcia M, et al. Impact of empathy in the patient-doctor relationship on chronic pain relief and quality of life: a prospective study in Spanish pain clinics. *Pain Medicine*. 2018;19(7):1304–1314. doi:10.1093/pm/pnx160.

Patient Care 5: Management of Procedural Care **Overall Intent:** To understand that procedural care is critical to the scope of family medicine, both in performing and explaining procedures for patients; to understand that procedures will vary by program, community, and practice setting	
Milestones	**Examples**
Level 1 *Identifies the breadth of procedures that family physicians perform* *Recognizes family physicians' role in referring patients for appropriate procedural care*	● Identifies that a patient with a knee effusion can be treated with arthrocentesis in the family medicine center and does not require referral ● Recognizes that a family physician has the responsibility to recommend and coordinate the referral of a patient with suspected hernia seen in family medicine practice (FMP)
Level 2 *Identifies patients for whom a procedure is indicated and who is equipped to perform it* *Counsels patients about expectations for common procedures performed by family physicians and consultants*	● Identifies that a patient with squamous intraepithelial lesion on a pap smear needs a colposcopy and that the FMP offers this service to its patients ● Obtains informed consent prior to performing a punch biopsy of a skin lesion
Level 3 *Demonstrates confidence and motor skills while performing procedures, including addressing complications* *Performs independent risk and appropriateness assessment based on patient-centered priorities for procedures performed by consultants*	● Adeptly performs a newborn circumcision using an accepted clamp technique and is able to promptly control any unexpected bleeding ● For a morbidly obese patient who has chosen to pursue bariatric surgery, counsels the surgical options and completes a preoperative evaluation and risk assessment
Level 4 *Identifies and acquires the skills to independently perform procedures in the current practice environment* *Collaborates with procedural colleagues to match patients with appropriate procedures; including declining support for procedures that are not in the patient's best interest*	● Identifies minimal exposure to skin procedures and seeks opportunities to obtain additional experience via simulation, then under direct observation and eventually independently ● Articulates to local cardiologist that an elderly patient with advanced dementia and severe aortic stenosis is not an appropriate candidate for transcatheter aortic valve replacement, even if technically feasible
Level 5 *Identifies procedures needed in future practice and pursues supplemental training to independently perform*	● Determines that the community does not have adequate colonoscopy services and seeks the opportunity to be proctored and learn procedure
Assessment Models or Tools	● Clinical case discussion

	● Direct observation ● Objective structured clinical examination ● Simulation
Curriculum Mapping	●
Notes or Resources	● Nothnagle M, Sicilia JM, Forman S, et al. Required procedural training in family medicine residency: a consensus statement. *Family Medicine*. 2008;40(4):248-252. https://www.stfm.org/FamilyMedicine/Vol40Issue4/Nothnagle248. 2019. ● Barstow C, Shahan B, Roberts M. Evaluating medical decision-making capacity in practice. *Am Fam Physician*. 2018;98(1):40-46. https://www.aafp.org/afp/2018/0701/p40.html. 2019. ● Fowler G. *Pfenninger and Fowler's Procedures for Primary Care*. 4th ed. Philadelphia, PA: Elsevier; 2019. https://evolve.elsevier.com/cs/product/9780323476331?role=student. 2019.

Medical Knowledge 1: Demonstrates Medical Knowledge of Sufficient Breadth and Depth to Family Medicine **Overall Intent:** To integrate and apply medical knowledge throughout the full scope of family medicine across the lifespan of the individual in the context of his or her family and community	
Milestones	**Examples**
Level 1 *Describes the pathophysiology and treatments of patients with common conditions* *Describes how behaviors impact patient health*	● Explains the pathophysiology of type 2 diabetes and how weight loss, regular exercise, and commonly used diabetes medications work ● Describes how poor dietary choices and inadequate physical exercise have contributed to obesity and type 2 diabetes
Level 2 *Applies knowledge of pathophysiology with intellectual curiosity for treatment of patients with common conditions* *Identifies behavioral strategies to improve health*	● Prescribes diabetic medications in a sequential, rational, and stepwise fashion which factors in pharmacodynamics and current literature recommendations ● Understands that using motivational interviewing assists with behavioral change
Level 3 *Demonstrates knowledge of complex pathophysiology and the comprehensive management of patients across the lifespan* *Engages in learning behavioral strategies to address patient care needs*	● Develops a management plan for achieving appropriate glycemic control for a patient with type 2 diabetes, monitoring for and managing the microvascular and macrovascular complications. Able to list the appropriate guidelines and goals for A1C parameters in patients with different co-morbidities and age ● Works with behaviorist through co-counseling visits to learn to better engage a patient who is resistant to change
Level 4 *Integrates clinical experience and comprehensive knowledge in the management of patients across the lifespan* *Demonstrates comprehensive knowledge of behavioral strategies and resources to address patient's needs*	● Shares learned strategies with colleagues about working with children and families who are opposed to vaccinations ● Prioritizes multiple strategies to use for an adolescent patient with suicidal ideation and identifies resources for acute and long term treatment for the patient and their family
Level 5 *Expands the knowledge base of Family Medicine through dissemination of original research*	● Publishes a book chapter or peer review article on diabetes management
Assessment Models or Tools	● Clinical case discussion ● Direct observation ● In-training exam ● Knowledge testing ● Medical record (chart) audit ● Objective structured clinical examination

Curriculum Mapping	●
Notes or Resources	● American Family Physician. Journals. https://www.aafp.org/journals/afp.html. 2019. ● Osteopathic Family Physician Journal. Index. https://www.ofpjournal.com/index.php/ofp. 2019.

Medical Knowledge 2: Critical Thinking and Decision Making **Overall Intent:** To analyze and synthesize medical knowledge to apply critical reasoning to clinical decision making, appropriately prioritizing diagnoses and using diagnostic tests	
Milestones	**Examples**
Level 1 *Incorporates key elements of a patient story into an accurate depiction of their presentation*	● Presents a patient with COPD, including relevant pulmonary symptoms and smoking history after interviewing the patient
Describes common causes of clinical reasoning error	● Lists anchoring and recency biases as potential causes of clinical reasoning error
Interprets results of common diagnostic testing	● Identifies an abnormal HbA1c as indicative of a presumptive diagnosis of diabetes
Level 2 *Develops an analytic, prioritized differential diagnosis for common presentations*	● Prioritizes common-to-rare differential diagnoses for anemia
Identifies types of clinical reasoning errors within patient care, with guidance	● When asked by an attending, is able to recognize that a missed diagnosis of gout in a patient with a normal uric acid level may be due to anchoring bias
Interprets complex diagnostic information	● Reviews the results of stress echocardiography to determine if the patient is having ischemia
Level 3 *Develops a prioritized differential diagnosis for complex presentations*	● Prioritizes a broad differential diagnosis for the presentation of chronic shortness of breath with fatigue
Demonstrates a structured approach to personally identify clinical reasoning errors	● Participates in quality and patient safety conferences, reviewing decision making that may have led to a missed diagnosis of colon cancer in a 35-year-old patient
Synthesizes complex diagnostic information accurately to reach high probability diagnoses	● Uses the clinical laboratory and radiological findings to make a presumptive diagnosis of sarcoidosis
Level 4 *Synthesizes information to reach high probability diagnoses with continuous re-appraisal to minimize clinical reasoning errors*	● Identifies cognitive bias if laboratory studies deviate from anticipated results and adjusts diagnostic and treatment plan of care
Anticipates and accounts for errors and biases when interpreting diagnostic tests	● Changes an emergency room diagnosis of COPD exacerbation to acute pulmonary embolus by reviewing clinical evidence and correcting bias errors associated with the incorrect diagnosis

Level 5 *Engages in deliberate practice and coaches others to minimize clinical reasoning errors* *Pursues knowledge of new and emerging diagnostic tests*	● Includes common clinical reasoning errors when presenting a lecture on differential diagnosis for shortness of breath ● The resident understands the science and application of multipoint DNA testing for colorectal cancer and presents this information to others
Assessment Models or Tools	● Case-based discussions ● Multisource feedback ● Medical record (chart) audit ● Preceptor encounters ● Reflection
Curriculum Mapping	●
Notes or Resources	● Humbert AJ, Besinger B, Miech Ej. Assessing clinical reasoning skills in scenarios of uncertainty: convergent validity for a Script Concordance Test in an emergency medicine clerkship and residency. *Acad Emerg Med*. 2011;18(6):627-634. doi:10.1111/j.1553-2712.2011.01084.x. ● Croskerry P. Achieving quality in clinical decision making: cognitive strategies and detection of bias. *Academic Emergency Medicine*. 2002;9(11):1184-1204. doi:10.1197/aemj.9.11.1184. ● Hedrick TL, Young JS. The use of “war games”’ to enhance high-risk clinical decision-making in students and residents. *The American Journal of Surgery*. 2008;195(6):843-849. doi:10.1016/j.amjsurg.2007.06.032. ● Norman GR, Monteiro SD, Sherbino J, Ilgen JS, Schmidt HG, Mamede S. The causes of errors in clinical reasoning: cognitive biases, knowledge deficits, and dual process thinking. *Acad Med*. 2017;92(1):23-30. doi:10.1097/ACM.0000000000001421. ● Royce CS, Hayes MM, Schwartzstein RM. Teaching critical thinking: a case for instruction in cognitive biases to reduce diagnostic errors and improve patient safety. *Acad Med*. 2019;94(2):187-194. doi:10.1097/ACM.0000000000002518.

Systems-based Practice 1: Patient Safety and Quality Improvement (QI) **Overall Intent:** To engage in the analysis and management of patient safety events, including relevant communication with patients, families, and health care professionals; to conduct a QI project	
Milestones	**Examples**
Level 1 *Demonstrates knowledge of common patient safety events*	● Lists patient misidentification or medication errors as common patient safety events
Demonstrates knowledge of how to report patient safety events	● Describes how to report errors in your environment
Demonstrates knowledge of basic quality improvement methodologies and metrics	● Describes fishbone tool
Level 2 *Identifies system factors that lead to patient safety events*	● Identifies lack of hand sanitizer dispenser at each clinical exam room may lead to increased infection rates
Reports patient safety events through institutional reporting systems (actual or simulated)	● Reports lack of hand sanitizer dispenser at each clinical exam room to the medical director
Describes local quality improvement initiatives (e.g., community vaccination rate, infection rate, smoking cessation)	● Summarizes protocols resulting in decreased spread of hospital acquired *C. diff*
Level 3 *Participates in analysis of patient safety events (simulated or actual)*	● Preparing for morbidity and mortality presentations
Participates in disclosure of patient safety events to patients and families (simulated or actual)	● Through simulation, communicates with patients/families about a vaccine administration error
Participates in local quality improvement initiatives	● Participates in project identifying root cause of rooming inefficiency
Level 4 *Conducts analysis of patient safety events and offers error prevention strategies (simulated or actual)*	● Collaborates with a team to conduct the analysis of a vaccine administration errors and can effectively communicate with patients/families about those events

Discloses patient safety events to patients and families (simulated or actual) *Demonstrates skills required to identify, develop, implement, and analyze a quality improvement project*	● Participates in the completion of a QI project to improve human papillomavirus (HPV) vaccination rates within the practice, including assessing the problem, articulating a broad goal, developing a SMART (specific, measurable, attainable, relevant, time-based) objective plan, and monitoring progress and challenges
Level 5 *Actively engages teams and processes to modify systems to prevent patient safety events* *Role models or mentors others in the disclosure of patient safety events* *Designs, implements, and assesses quality improvement initiatives at the institutional or community level*	● Assumes a leadership role at the departmental or institutional level for patient safety ● Conducts a simulation for disclosing patient safety events ● Initiates and completes a QI project to improve county HPV vaccination rates in collaboration with the county health department and shares results with stakeholders
Assessment Models or Tools	● Direct observation ● E-module multiple choice tests ● Medical record (chart) audit ● Portfolio review ● Reflection ● Simulation
Curriculum Mapping	●
Notes or Resources	● Institute for Healthcare Improvement. http://www.ihi.org/Pages/default.aspx. 2019. ● The Joint Commission. https://www.jointcommission.org/. 2019. ● Agency for Healthcare Research and Quality. Quality and Patient Safety. https://www.ahrq.gov/professionals/quality-patient-safety/index.html. 2019. ● Agency for Healthcare Research and Quality. TeamSTEPPS. https://www.ahrq.gov/teamstepps/index.html. 2019. ● World Health Organization. Patient Safety. https://www.who.int/patientsafety/en/. 2019. ● American Academy of Family Physicians. Basics of Quality Improvement. https://www.aafp.org/practice-management/improvement/basics.html. 2019. ● American Board of Family Medicine. Performance Improvement. https://www.theabfm.org/continue-certification/performance-improvement. 2019.

Systems-Based Practice 2: System Navigation for Patient-Centered Care **Overall Intent:** To effectively navigate the health care system, including the interdisciplinary team and other care providers; to adapt care to a specific patient population to ensure high-quality patient outcomes	
Milestones	**Examples**
Level 1 *Demonstrates knowledge of care coordination* *Identifies key elements for safe and effective transitions of care and handoffs* *Demonstrates knowledge of population and community health needs*	● For a patient with multiple myeloma identifies the hematologist-oncologist, home health nurse, and social workers as members of the team ● Lists the essential components of a structured tool such as I-PASS for sign-out and care transition and hand-offs ● Identifies that patients in rural areas may have different needs than urban patients
Level 2 *Coordinates care of patients in routine clinical situations effectively utilizing the roles of the interprofessional team member* *Performs safe and effective transitions of care/handoffs in routine clinical situations* *Identifies specific population and community health needs in their local population*	● Coordinates care with the heart failure clinic at the time of discharge from the hospital ● Routinely uses I-PASS for a stable patient during night float sign-out ● Identifies that limited transportation options may be a factor in rural patients getting to multiple chemotherapy appointments
Level 3 *Coordinates care of patients in complex clinical situations effectively utilizing the roles of the interprofessional team member* *Performs safe and effective transitions of care/handoffs in complex clinical situations* *Uses local resources effectively to meet the needs of a patient population and community*	● Works with the social worker to coordinate care for a homeless patient that will ensure follow-up to a heart failure clinic after discharge from the hospital ● Routinely uses I-PASS when transferring a patient to the intensive care unit ● Refers patients to a local pharmacy which provides a sliding fee scale option and prints pharmacy coupons for patients in need
Level 4 *Role models effective coordination of patient-centered care among different disciplines and specialties* *Role models and advocates for safe and effective transitions of care/handoffs within and*	● During inpatient rotations, leads team members in approaching consultants to review cases/recommendations and arranges radiology rounds for the team ● Prior to going on vacation, proactively informs the covering FMP resident about a plan of care for a pregnant patient who has elevated blood pressure at 36 weeks and has outpatient labs pending

across healthcare delivery systems including outpatient settings *Participates in changing and adapting practice to provide for the needs of specific populations*	● Assists to design FMP protocols for prescribing naloxone to patients with opioid use disorders
Level 5 *Analyzes the process of care coordination and leads in the design and implementation of improvements* *Improves quality of transitions of care within and across healthcare delivery systems to optimize patient outcomes* *Leads innovations and advocates for populations and communities with specific health care needs*	● Leads a program to arrange for team home visits to newborns at high risk for infant mortality ● Develops a protocol to improve transitions to long term care facilities ● Leads development of telehealth diagnostic services for a rural FMP site
Assessment Models or Tools	● Direct observation ● Medical record (chart) audit ● Multisource feedback ● Objective structured clinical examination ● Portfolio review ● Quality metrics and goals mined from electronic health records (EHR)
Curriculum Mapping	●
Notes or Resources	● Institute for Healthcare Improvement. IHI Open School Online Courses. http://www.ihi.org/education/IHIOpenSchool/courses/Pages/default.aspx. 2019. ● Centers for Disease Control and Prevention. Population Health Training in Place Program (PH-TIPP). https://www.cdc.gov/pophealthtraining/whatis.html. 2019. ● Skochelak SE, Hawkins RE, Lawson LE, Starr SR, Borkan JM, Gonzalo JD. *AMA Education Consortium: Health Systems Science*. 1st ed. Philadelphia, PA: Elsevier; 2016. https://commerce.ama-assn.org/store/ui/catalog/productDetail?product_id=prod2780003. 2019. ● Spector ND, Starner AJ, Allen AD, Bale JF, Bismilla Z. I-PASS handoff curriculum: core resident workshop. *MedEdPORTAL*. 2013;9. doi:10.15766/mep_2374-8265.9311. ● Phillips RL Jr, Pugno PA, Saultz JW, et al. Health is primary: family medicine for America's health. *Ann Fam Med*. 2014;12(Suppl 1):S1-S12. doi:10.1370/afm.1699.

	● American Academy of Family Physicians. The EveryONE Project TOOLKIT. https://www.aafp.org/patient-care/social-determinants-of-health/everyone-project/eop-tools.html. 2019. ● UCSF. Center for Excellence in Primary Care. https://cepc.ucsf.edu/. 2019.

Systems-Based Practice 3: Physician Role in Health Care Systems **Overall Intent:** To understand his/her role in the complex health care system and how to optimize the system to improve patient care and the health system's performance	
Milestones	**Examples**
Level 1 *Identifies key components of the complex healthcare system (e.g., hospital, skilled nursing facility, finance, personnel, technology)*	● Able to articulate differences between skilled nursing and long-term care facilities
Describes basic health payment systems, (including government, private, public, uninsured care) and practice models	● Understands the impact of health plan coverage on prescription drugs for individual patients
Identifies basic knowledge domains for effective transition to practice (e.g., information technology, legal, billing and coding, financial, personnel)	● Identifies that notes must meet coding requirements
Level 2 *Describes how components of a complex healthcare system are interrelated, and how this impacts patient care*	● Explains that improving patient satisfaction impacts patient adherence and payment to the health system
Delivers care with consideration of each patient's payment model (e.g., insurance type)	● Takes into consideration patient's prescription drug coverage when choosing a statin for treatment of hyperlipidemia
Demonstrates use of information technology required for medical practice (e.g., electronic medical record, documentation required for billing and coding)	● Recognizes that appropriate documentation can influence the severity of illness determination upon discharge
Level 3 *Discusses how individual practice affects the broader system (e.g., length of stay, readmission rates, clinical efficiency)*	● Ensures that patient with COPD has a scheduled follow up appointment at discharge within seven days to reduce risk of readmission
Engages with patients in shared-decision making, informed by each patient's payment models	● Discusses risks and benefits of pursuing MRI imaging in the setting of acute low back pain when a patient has a high out of pocket deductible

Describes core administrative knowledge needed for transition to practice (e.g., contract negotiations, malpractice insurance, government regulation, compliance)	● Understands the core elements of employment contract negotiation
Level 4 *Manages various components of the complex healthcare system to provide efficient and effective patient care and transition of care* *Advocates for patient care needs (e.g., community resources, patient assistance resources)* *Analyzes individual practice patterns and prepares for professional requirements*	● Ensures proper documentation of three day qualifying hospital stay prior to discharging a patient to a skilled nursing facility for physical therapy ● Works collaboratively to improve patient assistance resources for a patient with a recent amputation and limited resources ● Proactively compiles procedure log in anticipation of applying for hospital privileges
Level 5 *Advocates for or leads systems change that enhances high value, efficient and effective patient care and transition of care* *Participates in health policy advocacy activities*	● Works with community or professional organizations to advocate for no smoking ordinances ● Improves informed consent process for non-English-speaking patients requiring interpreter services
Assessment Models or Tools	● Direct observation ● Knowledge based content testing ● Medical record (chart) audit ● Multisource feedback ● QI metrics/practice data
Curriculum Mapping	●
Notes or Resources	● Center for Medicare and Medicaid Services. Merit-based Incentive Payment System (MIPS) Overview. https://qpp.cms.gov/mips/overview. 2019. ● Center for Medicare and Medicaid Services. MACRA: MIPS and MACRA. https://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/Value-Based-Programs/MACRA-MIPS-and-APMs/MACRA-MIPS-and-APMs.html. 2019. ● Agency for Healthcare Research and Quality. The Challenges of Measuring Physician Quality. https://www.ahrq.gov/talkingquality/measures/setting/physician/challenges.html. 2019. ● Agency for Healthcare Research and Quality. Major Physician Measurement Sets. https://www.ahrq.gov/talkingquality/measures/setting/physician/measurement-sets.html. 2018.

	● The Kaiser Family Foundation. Health Reform. https://www.kff.org/health-reform/. 2019. ● Dzau VJ, McClellan MB, McGinnis M, et al. Vital directions for health and health care: positions from a National Academy of Medicine Initiative. *JAMA*. 2017;317(14):1461-1470. doi:10.1001/jama.2017.1964. ● The Commonwealth Fund. Health System Data Center. http://datacenter.commonwealthfund.org/?_ga=2.110888517.1505146611.1495417431-1811932185.1495417431#ind=1/sc=1. 2019. ● The Commonwealth Fund. Health Reform Resource Center. http://www.commonwealthfund.org/interactives-and-data/health-reform-resource-center#/f:@facasubcategoriesfacet63677=[Individual%20and%20Employer%20Responsibility. 2019. ● Institute for Healthcare Improvement. IHI Open School Online Courses. http://app.ihi.org/lmsspa/#/6cb1c614-884b-43ef-9abd-d90849f183d4. 2019.

Systems-Based Practice 4: Advocacy **Overall Intent:** To ensure that family physicians are able to use their voice to speak to the concerns of patient populations and for family medicine as a discipline	
Milestones	**Examples**
Level 1 *Identifies that advocating for patient populations is a professional responsibility*	● Accepts role in helping patients access resources ● Recognizes the impact of the physician voice
Level 2 *Identifies that advocating for Family Medicine is a professional responsibility*	● Actively recruits medical students for family medicine ● Endorses the importance of family medicine's role in health care system
Level 3 *Describes how stakeholders influence and patients are affected by health policy at the local, state, and federal level*	● Discusses impact of legislative action on patient health and health care delivery ● Identifies stakeholders around a legislative topic
Level 4 *Access advocacy tools and other resources needed to achieve (or prevent a deleterious) policy change*	● Complete online advocacy modules ● Responds to advocacy email alerts
Level 5 *Develops an ongoing relationship with stakeholders that advances or prevents a policy change that improves individual or community health*	● Contacts legislators on matters important to family medicine ● Serves as the resident delegate to a professional organization ● Attends advocacy days at the state capitol to speak with legislators ● Develops grant proposals along with implementation to assist in community initiatives (for example, grants to help those with food or financial insecurity that impacts their health)
Assessment Models or Tools	● Completion of e-modules ● Direct observation ● Multisource feedback ● Portfolio
Curriculum Mapping	●
Notes or Resources	● American Osteopathic Association. Advocacy. https://osteopathic.org/about/advocacy/. 2019. ● American College of Osteopathic Family Physicians. Advocacy. https://www.acofp.org/acofpimis/Acofporg/Default.aspx?hkey=19ca3704-4183-4ca8-8532-db156c7820c4&WebsiteKey=fc4f41d1-af75-443c-a928-3d7d67bac6a7. 2019. ● American Academy of Family Physicians. Advocacy. https://www.aafp.org/advocacy.html. 2019. ● American Medical Association. Advocacy. https://www.ama-assn.org/advocacy. 2019. ● Robert Graham Center. http://www.graham-center.org/rgc/home.html 2019. ● Society of Teachers of Family Medicine (STFM). Online courses: advocacy modules. https://www.stfm.org/facultydevelopment/onlinecourses/advocacycourse/overview/ Accessed 2019.

	● STFM. Advocacy: advocacy resources and key issues. https://www.stfm.org/about/advocacy/resourcesandissues/. Accessed 2019.

Practice-Based Learning and Improvement 1: Evidence-Based and Informed Practice **Overall Intent:** To incorporate evidence and patient values into clinical practice	
Milestones	**Examples**
Level 1 *Demonstrates how to access, categorize, and analyze clinical evidence*	● Identifies evidence-based guidelines for osteoporosis screening at USPSTF website
Level 2 *Articulates clinical questions and elicits patient preferences and values in order to guide evidence based care*	● In a patient with hyperlipidemia, identifies and discusses potential evidence-based treatment options, and solicits patient perspective ● Explains why a screening test should not be performed
Level 3 *Locates and applies the best available evidence, integrated with patient preference, to the care of complex patients*	● Obtains, discusses, and applies evidence for the treatment of a patient with hyperlipidemia and co-existing diabetes and hypertension ● Understands and appropriately uses clinical practice guidelines in making patient care decisions while eliciting patient preferences
Level 4 *Critically appraises and applies evidence even in the face of uncertainty and conflicting evidence to guide care, tailored to the individual patient*	● Accesses the primary literature to identify alternative treatments to bisphosphonates for osteoporosis
Level 5 *Coaches others to critically appraise and apply evidence for complex patients; and/or collaboratively develops evidence based decision making tools*	● Leads clinical teaching on application of best practices in critical appraisal of sepsis criteria ● As part of a team, develops low-risk chest pain protocol for the emergency department
Assessment Models or Tools	● Direct observation ● Medical record (chart) audit ● Oral or written examination ● Presentation evaluation ● Research portfolio
Curriculum Mapping	●
Notes or Resources	● US Preventive Services Task Force. https://www.uspreventiveservicestaskforce.org/. 2019. ● Agency for Healthcare Research and Quality. Guidelines and Measures. https://www.ahrq.gov/gam/index.html. 2019. ● Mayo Clinic. Mayo Clinic Shared Decision Making National Resource Center https://shareddecisions.mayoclinic.org/. 2019. ● Fortin AH, Dwamena FC, Frankel RM, Smith RC. *Smith's Patient Centered Interviewing: An Evidence-Based Method*. 4th ed. New York, NY: McGraw Hill; 2018. https://accessmedicine.mhmedical.com/book.aspx?bookid=2446. 2019.

	● Guyatt G, Rennie D, Meade MO, Cook DJ. *Users' Guides to the Medical Literature.* 3rd ed. New York, NY: McGraw Hill; 2015. https://jamaevidence.mhmedical.com/book.aspx?bookId=847. 2019. ● U.S. National Library of Medicine. PubMed Tutorial. https://www.nlm.nih.gov/bsd/disted/pubmedtutorial/cover.html. 2019. ● Institutional IRB guidelines ● Various journal submission guidelines

Practice-Based Learning and Improvement 2: Reflective Practice and Commitment to Personal Growth **Overall Intent:** To seek clinical performance information with the intent to improve care; reflects on all domains of practice, personal interactions, and behaviors, and their impact on colleagues and patients (reflective mindfulness); develop clear objectives and goals for improvement in the form of a personal learning plan	
Milestones	**Examples**
Level 1 *Accepts responsibility for personal and professional development by establishing goals*	● Initiates personal goals and meets with advisor to discuss
Identifies the factors which contribute to gap(s) between expectations and actual performance	● Is aware that inadequate sleep may adversely impact performance
Acknowledges there are always opportunities for self-improvement	● Attends and engages in didactic sessions and supplemental readings
Level 2 *Demonstrates openness to performance data (feedback and other input) in order to inform goals*	● Increasingly able to identify performance gaps in terms of diagnostic skills and daily work using feedback and supplied performance metrics
Self-reflects and analyzes factors which contribute to gap(s) between expectations and actual performance	● After working with an attending for a week, asks him/her about performance and opportunities for improvement
Designs and implements a learning plan, with prompting	● Uses feedback with a goal of improving communication skills with peers/colleagues, staff members, and patients the following week
Level 3 *Intermittently seeks additional performance data with adaptability and humility*	● Takes input from peers/colleagues and supervisors to gain complex insight into personal strengths and areas to improve ● Self-reflects and is appreciative, no defensive of others' input
Self-reflects, analyzes, and institutes behavioral change(s) to narrow the gap(s) between expectations and actual performance	● Documents goals in a more specific and achievable manner, such that attaining them is reasonable and measurable
Independently creates and implements a learning plan	● Seeks out and engages in activities targeted at practice areas requiring improvement
Level 4 *Consistently seeks performance data with adaptability and humility*	● Is clearly in the habit of making a learning plan for each rotation, seeks out data on his/her clinical performance

Challenges assumptions and considers alternatives in narrowing the gap(s) between expectations and actual performance *Uses performance data to measure the effectiveness of the learning plan and when necessary, improves it*	● Consistently identifies ongoing gaps and chooses areas for further development ● Consistently seeks out and engages in evidence based activities targeted at practice areas requiring improvement identified by external sources as well as self-reflection
Level 5 *Leads performance review processes* *Coaches others on reflective practice* *Facilitates the design and implementing learning plans for others*	● Actively discusses learning goals with supervisors and colleagues; may encourage other learners on the team to consider how their behavior affects the rest of the team ● Serves as a role model for self-reflection and effective self-directed learning ● Demonstrates emotional intelligence and cognitive reframing skills
Assessment Models or Tools	● Direct observation ● Review of learning plan ● SWOT analysis ● Self-reflection
Curriculum Mapping	●
Notes or Resources	● Hojat M, Veloski JJ, Gonnella JS. Measurement and correlates of physicians' lifelong learning. *Acad Med.* 2009;84(8):1066-74. doi:10.1097/ACM.0b013e3181acf25f. ● Winkel AF, Yingling S, Jones AA, Nicholson J. Reflection as a learning tool in graduate medical education: a systematic review. *JGME*. 2017;9(4):430-439. doi:10.4300/JGME-D-16-00500.1. ● Grant A, McKimm J, Murphy F. *Developing Reflective pRactice: A Guide for Medical Students, Doctors and Teachers*. Hoboken, NJ: Wiley-Blackwell; 2017. https://www.wiley.com/en-us/Developing+Reflective+Practice%3A+A+Guide+for+Medical+Students%2C+Doctors+and+Teachers-p-9781119064749. 2019. ● Burke AE, Benson B, Englander R, Carraccio C, Hicks PJ. Domain of competence: practice-based learning and improvement. *Acad Pediatr.* 2014;14(2 Suppl):S38-S54. doi:10.1016/j.acap.2013.11.018. ● Lockspeiser TM, Schmitter PA, Lane JL, Hanson JL, Rosenberg AA, Park YS. Assessing residents' written learning goals and goal writing skill: validity evidence for the learning goal scoring rubric. *Acad Med.* 2013;88(10):1558-1563. doi:10.1097/ACM.0b013e3182a352e6. ● Kraut A, Yarris LM, Sargeant J. Feedback: cultivating a positive culture. *J Grad Med Educ*. 2015;7(2):262-264. doi:10.4300/JGME-D-15-00103.1.

	● RJug R, Jiang XS, Bean SM. Giving and receiving effective feedback: a review article and how-to guide. *Arch Pathol Lab Med*. 2019;143(2):244-250. doi:10.5858/arpa.2018-0058-RA.

Professionalism 1: Professional Behavior and Ethical Principles **Overall Intent:** To recognize and address lapses in ethical and professional behavior, demonstrates ethical and professional behaviors, and use appropriate resources for managing ethical and professional dilemmas	
Milestones	**Examples**
Level 1 *Describes professional behavior and potential triggers for personal lapses in professionalism*	● Understands that being tired can cause a lapse in professionalism
Takes responsibility for personal lapses in professionalism	● Understands being late to sign out has adverse effect on patient care and on professional relationships
Demonstrates knowledge of ethical principles	● Articulates how the principle of "do no harm" applies to a patient who may not need a central line even though the training opportunity exists
Level 2 *Demonstrates professional behavior in routine situations*	● Respectfully approaches a resident who is late to sign out about the importance of being on time
Describes when and how to report professionalism lapses in self and others	● Notifies appropriate supervisor when a resident is routinely late to sign out
Analyzes straightforward situations using ethical principles	● Identifies and applies ethical principles involved in informed consent when the resident is unclear of all of the risks
Level 3 *Demonstrates professional behavior in complex or stressful situations*	● Appropriately responds to a distraught family member, following an unsuccessful resuscitation attempt of a relative
Recognizes need to seek help in managing and resolving complex professionalism lapses	● After noticing a colleague's inappropriate social media post, reviews policies related to posting of content and seeks guidance
Analyzes complex situations using ethical principles	● Offers treatment options for a terminally ill patient, free of bias, while recognizing own limitations, and consistently honoring the patient's choice
Level 4 *Recognizes situations that may trigger professionalism lapses and intervenes to prevent lapses in self and others*	● Actively considers the perspectives of others ● Models respect for patients and promotes the same from colleagues, when a patient has been waiting an excessively long time to be seen
Recognizes and utilizes appropriate resources for managing and resolving dilemmas as needed	● Recognizes and uses ethics consults, literature, risk management, and/or legal counsel in order to resolve ethical dilemmas

Level 5 *Mentors others in professional behavior* *Identifies and seeks to address system-level factors that induce or exacerbate ethical problems and professionalism lapses or impede their resolution*	● Coaches others when their behavior fails to meet professional expectations and creates a performance improvement plan to prevent recurrence ● Engages stakeholders to address excessive wait times in the FMP to decrease patient and provider frustrations that lead to unprofessional behavior
Assessment Models or Tools	● Direct observation ● Multisource feedback ● Oral or written self-reflection (e.g., of a personal or observed lapse, ethical dilemma, or systems-level factors) ● Simulation
Curriculum Mapping	●
Notes or Resources	● American Medical Association. Ethics. https://www.ama-assn.org/delivering-care/ama-code-medical-ethics. 2019. ● ABIM Foundation. American Board of Internal Medicine. Medical professionalism in the new millennium: a physician charter. *Annals of Internal Medicine*. 2002;136(3):243. doi:10.7326/0003-4819-136-3-200202050-00012. ● Byyny RL, Papadakis MA, Paauw DS, Pfiel S, Alpha Omega Alpha. *Medical Professionalism Best Practices*. Menlo Park, CA: Alpha Omega Alpha Honor Medical Society; 2017. https://alphaomegaalpha.org/pdfs/2015MedicalProfessionalism.pdf.2019. ● Levinson W, Ginsburg S, Hafferty FW, Lucey CR. *Understanding Medical Professionalism*. 1st ed. New York, NY: McGraw-Hill Education; 2014. https://accessmedicine.mhmedical.com/book.aspx?bookID=1058. 2019. ● Jefferson Univeristy. Jefferson Scale of Empathy. https://www.jefferson.edu/university/skmc/research/research-medical-education/jefferson-scale-of-empathy.html. 2019. ● American Osteopathic Association. Physician Wellness. https://osteopathic.org/life-career/your-health-wellness/. 2019. ● American College of Osteopathic Family Physicians. https://www.acofp.org/acofpimis/. 2019. ● Mueller PS. Teaching and assessing professionalism in medical learners and practicing physicians. *Rambam Maimonides Med J*. 2015;6(2):e0011. doi:10.5041/RMMJ.10195. ● Local resources such as Resident Handbook and Medical Error reporting policies.

Professionalism 2: Accountability/Conscientiousness **Overall Intent:** To take responsibility for one's own actions and the impact of these on patients and other members of the health care team	
Milestones	**Examples**
Level 1 *Takes responsibility for failure to complete tasks and responsibilities, identifies potential contributing factors, and describes strategies for ensuring timely task completion in the future* *Responds promptly to requests or reminders to complete tasks and responsibilities*	● Responds promptly to reminders from program administrator to complete work hour logs ● Timely attendance at conferences ● Completes end of rotation evaluations
Level 2 *Performs tasks and responsibilities in a timely manner with appropriate attention to detail in routine situations* *Recognizes situations that may impact own ability to complete tasks and responsibilities in a timely manner*	● Completes administrative tasks, documents safety modules, procedure review, and licensing requirements by specified due date ● Before going out of town, completes tasks in anticipation of lack of computer access while traveling
Level 3 *Performs tasks and responsibilities in a timely manner with appropriate attention to detail in complex or stressful situations* *Proactively implements strategies to ensure that the needs of patients, teams, and systems are met*	● Notifies attending of multiple competing demands on call, appropriately triages tasks, and asks for assistance from other residents or faculty members as needed ● In preparation for being out of the office, arranges coverage for assigned clinical tasks on FMP patients and ensures appropriate continuity of care
Level 4 *Recognizes and addresses situations that may impact others' ability to complete tasks and responsibilities in a timely manner*	● Takes responsibility for inadvertently omitting key patient information during sign-out and professionally discusses with the patient, family members, and interprofessional team
Level 5 *Takes ownership of system outcomes*	● Sets up a meeting with the nurse manager to streamline patient discharges and leads team to find solutions to the problem
Assessment Models or Tools	● Compliance with deadlines and timelines ● Direct observation ● Multisource feedback ● Resident learning portfolio ● Self-evaluations and reflective tools ● Simulation

Curriculum Mapping	●
Notes or Resources	● American Society of Anesthesiologists. Standards and Guidelines. https://www.asahq.org/standards-and-guidelines. 2019. ● Code of conduct from fellow/resident institutional manual ● Expectations of residency program regarding accountability and professionalism

Professionalism 3: Self-Awareness and Help-Seeking **Overall Intent:** To examine resident insight and ability to monitor and address personal well-being and professional growth	
Milestones	**Examples**
Level 1 *Recognizes status of personal and professional well-being, with assistance* *Recognizes limits in the knowledge/skills of self, with assistance*	● Acknowledges their fatigue when pointed out by a colleague ● Recognizes that asking for help is a sign of strength and not a sign of weakness ● Accepts and exhibits positive responses to constructive feedback ● Receptive to attending physician guidance prior to seeing a patient
Level 2 *Independently recognizes status of personal and professional well-being* *Independently recognizes limits in the knowledge /skills of self and team and demonstrates appropriate help-seeking behaviors*	● Identifies times when critical thinking is impaired due to fatigue ● Recognizes own symptoms of depression ● Actively seeks guidance when unsure about a clinical situation ● Schedules a review session with an attending when there are challenges understanding the management of COPD with inhalers
Level 3 *Proposes a plan to optimize personal and professional well-being, with guidance* *Proposes a plan to remediate or improve limits in the knowledge/ skills of self or team, with guidance*	● After meeting with an advisor over concerns about increased stress in residency, develops a schedule for daily exercise ● Is receptive to faculty member suggestions to seek outside evaluation and/or treatment for possible learning disability ● Coordinates with advisor to schedule blocked times in FMP and during the inpatient rotation for lactation ● Seeks assistance to develop a learning plan for an identified gap in prioritizing treatment needs of patients with multiple comorbid conditions
Level 4 *Independently develops a plan to optimize personal and professional well-being* *Independently develops a plan to remediate or improve limits in the knowledge/skills of self or team*	● After becoming a parent, adjusts time management to allow for completion of clinical work while attending to family needs ● Initiates contact with a financial planner to optimize loan repayment strategies ● Develops workshop to address ability of team to manage shoulder dystocia ● After a missed diagnosis of diabetic ketoacidosis on the inpatient service, develops a workshop to review best practice for the management of this condition at noon conference
Level 5 *Addresses system barriers to maintain personal and professional well-being*	● Works as part of a system committee to develop and administer wellness survey

Mentors others to enhance knowledge/ skills of self or team	● Leads an Education Committee to develop longitudinal workshops
Assessment Models or Tools	● Direct observation ● Group interview or discussions for team activities ● Individual interview ● Multisource feedback ● Online training modules ● Participation in well-being programs ● Personal learning plan ● Reflection ● Self SWOT ● Self-assessment
Curriculum Mapping	●
Notes or Resources	● This subcompetency is not intended to evaluate a resident's well-being, but to ensure each resident has the fundamental knowledge of factors that impact well-being, the mechanisms by which those factors impact well-being, and available resources and tools to improve well-being. ● Local resources, including Employee Assistance ● Pipas CF. *A Doctor's Dozen: 12 Strategies for Personal Health and a Culture of Wellness*. Hanover, NH: Dartmouth College Press; 2018. https://www.press.uchicago.edu/ucp/books/book/distributed/D/bo44895080.html. 2019. ● Hicks PJ, Schumacher D, Guralnick S, Carraccio C, Burke AE. Domain of competence: personal and professional development. *Acad Pediatr*. 2014;14(2 Suppl):S80-97. doi:10.1016/j.acap.2013.11.017. ● ACGME. "Well-Being Tools and Resources." https://dl.acgme.org/pages/well-being-tools-resources. Accessed 2022. ● Case Network. CoreWellness Online. http://casenetwork.com/markets/corewellness/. 2019.

Interpersonal and Communication Skills 1: Patient- and Family-Centered Communication **Overall Intent:** To deliberately use language and behaviors to form constructive relationships with patients, identify communication barriers including self-reflection on biases, and minimize them in the doctor-patient relationships; organize and lead communication around shared decision making	
Milestones	**Examples**
Level 1 *Uses language and nonverbal behavior to demonstrate respect, establish rapport while communicating one's own role within the healthcare system*	● Introduces self and faculty members, identifies patient and others in the room, and engages all parties in health care discussion
Recognizes easily identified barriers to effective communication (e.g., language, disability)	● Identifies need for trained interpreter with non-English-speaking patients
Identifies the need to individualize communication strategies	● Uses age-appropriate language when discussing vaccinations with pediatric patients
Level 2 *Establishes a therapeutic relationship in straightforward encounters using active listening and clear language*	● Avoids medical jargon and restates patient perspective when discussing tobacco cessation
Identifies complex barriers to effective communication (e.g. health literacy)	● Recognizes the need for handouts with diagrams and pictures to communicate information to a patient who is unable to read
Organizes and initiates communication, sets the agenda, clarifies expectations and verifies understanding	● Prioritizes and sets agenda at the beginning of the appointment for a new patient with chronic back pain
Level 3 *Establishes a therapeutic relationship in challenging patient encounters*	● Acknowledges patient's request for an MRI for new onset back pain without red flags and arranges timely follow-up visit to align diagnostic plan with goals of care
When prompted, reflects on biases while attempting to minimize communication barriers	● In a discussion with the faculty member, acknowledges discomfort in caring for a patient with COPD who continues to smoke
Sensitively and compassionately delivers medical information, managing patient/family	● Conducts a family meeting to determine a plan for withdrawal of treatment in a terminally ill patient

values, goals, preferences, uncertainty, and conflict	
Level 4 *Maintains therapeutic relationships, with attention to patient/family concerns and context, regardless of complexity* *Independently recognizes biases while attempting to proactively minimize communication barriers* *Independently uses shared decision making to align patient/family values, goals, and preferences with treatment options to make a personalized care plan*	● Continues to engage representative family members with disparate goals in the care of a patient with dementia ● Reflects on bias related to lung cancer death of resident's father and solicits input from faculty about mitigation of communication barriers when counseling patients around smoking cessation ● Uses patient and family input to engage pastoral care and develop a plan for home hospice in the terminally ill patient, aligned with the patient's values
Level 5 *Mentors others in situational awareness and critical self-reflection to consistently develop positive therapeutic relationships* *Leads or develops initiatives to identify and address bias* *Role models shared decision making in patient/family communication including those with a high degree of uncertainty/conflict*	● Leads a discussion group on personal experience of moral distress ● Develops a residency curriculum on social justice which addresses unconscious bias ● Serves on a hospital bioethics committee
Assessment Models or Tools	● Direct observation ● Multisource feedback ● Portfolio ● Self-assessment including self-reflection exercises ● Standardized patients or structured case discussions
Curriculum Mapping	●
Notes or Resources	● Laidlaw A, Hart J. Communication skills: an essential component of medical curricula. Part I: Assessment of clinical communication: AMEE Guide No. 51. *Med Teach*. 2011;33(1):6-8. doi:10.3109/0142159X.2011.531170. ● Makoul G. Essential elements of communication in medical encounters: the Kalamazoo consensus statement. *Acad Med*. 2001;76(4):390-393. doi:10.1097/00001888-200104000-00021.

	● Makoul G. The SEGUE Framework for teaching and assessing communication skills. *Patient Educ Couns*. 2001;45(1):23-34. doi:10.1016/S0738-3991(01)00136-7. ● Symons AB, Swanson A, McGuigan D, Orrange S, Akl EA. A tool for self-assessment of communication skills and professionalism in residents. *BMC Med Educ*. 2009; 9:1. doi:10.1186/1472-6920-9-1.

Interpersonal and Communication Skills 2: Interprofessional and Team Communication **Overall Intent:** To effectively communicate with the health care team, including consultants, in both straightforward and complex situations	
Milestones	**Examples**
Level 1 *Respectfully requests/receives a consultation* *Uses language that values all members of the healthcare team*	● Contacts cardiology, identifies care team role and reason for consultation ● Correctly identifies individuals in the FMP by name and role; acknowledges team approach to care with patients
Level 2 *Clearly and concisely requests/responds to a consultation* *Communicates information effectively with all healthcare team members*	● Communicates physical exam and work-up to date to cardiology team when requesting consultation ● Uses osteopathic manipulative medicine consult template when reporting on a patient referred for somatic dysfunction ● Identifies reason for nursing follow up for international normalized ratio and parameters to contact the physician
Level 3 *Checks understanding of consult recommendations (received or provided)* *Communicates concerns and provides feedback to peers and learners*	● Uses closed loop communication when receiving cardiology recommendation ● Facilitates a mid-rotation feedback session with a student, developing an action plan for improved problem-focused medical history taking
Level 4 *Coordinates recommendations from different members of the healthcare team to optimize patient care, resolving conflict when needed* *Communicates feedback and constructive criticism to supervising individuals*	● Develops a single plan of care for a patient with multiple sclerosis based on recommendations from neurology, psychiatry, and pain management ● Respectfully raises concerns about a disruptive faculty member
Level 5 *Role models flexible communication strategies that value input from all healthcare team members, resolving conflict when needed* *Facilitates regular healthcare team-based feedback in complex situations*	● Effectively leads a clinical operations meeting to discuss controversial new scheduling templates ● Convenes and facilitates a multidisciplinary debriefing session after a failed resuscitation effort
Assessment Models or Tools	● Direct observation ● Medical record (chart) audit ● Multisource feedback

	● Simulation
Curriculum Mapping	●
Notes or Resources	● Roth CG, Eldin KW, Padmanabhan V, Freidman EM. Twelve tips for the introduction of emotional intelligence in medical education. *Med Teach*. 2018;21:1-4. doi:10.1080/0142159X.2018.1481499. ● Green M, Parrott T, Cook G. Improving your communication skills. *BMJ.* 2012;344:e357 doi:10.1136/bmj.e357. ● Henry SG, Holmboe ES, Frankel RM. Evidence-based competencies for improving communication skills in graduate medical education: a review with suggestions for implementation. *Med Teach*. 2013;35(5):395-403. doi:10.3109/0142159X.2013.769677. ● François, J. Tool to assess the quality of consultation and referral request letters in family medicine. *Can Fam Physician*. 2011;57(5):574–575. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3093595/. 2019. ● Fay D, Mazzone M, Douglas L, Ambuel B. A validated, behavior-based evaluation instrument for family medicine residents. *MedEdPORTAL*. 2007;3:622. doi:10.15766/mep_2374-8265.622. ● Dehon E, Simpson K, Fowler D, Jones A. Development of the faculty 360. *MedEdPORTAL*. 2015;11:10174. doi:10.15766/mep_2374-8265.10174. ● Lane JL, Gottlieb RP. Structured clinical observations: a method to teach clinical skills with limited time and financial resources. *Pediatrics*. 2000;105(4):973-977. https://pdfs.semanticscholar.org/8a78/600986dc5cffcab89146df67fe81aebeaecc.pdf. 2019. ● Braddock CH, Edwards KA, Hasenberg NM, Laidley TL, Levinson W. Informed decision making in outpatient practice: time to get back to basics. *JAMA*. 1999;282(24):2313-2320. doi:10.1001/jama.282.24.2313.

Interpersonal and Communication Skills 3: Communication within Health Care Systems **Overall Intent:** To effectively and responsibly use and improve EHR and health systems communication	
Milestones	**Examples**
Level 1 *Accurately and timely records information in the patient record*	● Completes notes promptly with accurate data
Learns institutional policy and safeguards patient personal health information	● Adheres to HIPAA requirements by not discussing patients in common areas
Communicates through appropriate channels as required by institutional policy (e.g. patient safety reports, cell phone/pager usage)	● Uses only secure text messaging and email systems when including patient data
Level 2 *Demonstrates organized diagnostic and therapeutic reasoning through notes in the patient record*	● After seeing a patient with low back pain the resident documents rationale for not ordering an MRI
Appropriately uses documentation shortcuts; records required data in formats and timeframes specified by institutional policy	● Avoids inappropriate copying and pasting of notes ● Adjusts contents of macros to be patient specific
Respectfully communicates concerns about the system	● Discusses the breakdown of communication between nurses and physicians with appropriate individuals
Level 3 *Uses patient record to communicate updated and concise information in an organized format*	● Documents changes in patient status in the medical record outside of the daily note ● Routinely updates problem list to reflect current status
Appropriately selects direct (e.g. telephone, in-person) and indirect (e.g. progress notes, text messages) forms of communication based on context and policy	● Calls the patient to communicate a concerning test result, then notifies the clinical staff to schedule an appointment
Uses appropriate channels to offer clear and constructive suggestions for system improvement while acknowledging system limitations	● Communicates specific opportunities for EHR improvement to appropriate advisory committee

Level 4 *Demonstrates efficiency in documenting patient encounters and updating record* *Manages the volume and extent of written and verbal communication that are required for practice* *Initiates difficult conversations with appropriate stakeholders to improve the system*	● Completes notes and updates charts for visits on day of appointment at a practice-level volume ● Manages practice-level volume of EHR tasks so addressed in a time-frame consistent with policy ● Participates in task force to update policy for sharing abnormal results ● Addresses members of the team, when needed, in an objective but compassionate, constructive, non-threatening manner
Level 5 *Optimizes and improves functionality of the electronic medical record within their system* *Guides departmental or institutional communication around policies and procedures* *Facilitates dialogue regarding systems issues among larger community stakeholders (residency institution, health care system, field)*	● Is identified an EHR super-user ● Participates in a task force established by the hospital QI committee to develop a plan to improve order sets ● Participates in pharmacy and therapeutics committees to develop EHR tools to communicate across or between systems
Assessment Models or Tools	● Direct observation ● Medical record (chart) audit ● Multisource feedback
Curriculum Mapping	●
Notes or Resources	● Bierman JA, Hufmeyer KK, Liss DT, Weaver AC, Heiman HL. Promoting responsible electronic documentation: validity evidence for a checklist to assess progress notes in the electronic health record. *Teach Learn Med.* 2017;29(4):420-432. doi:10.1080/10401334.2017.1303385. ● Starmer AJ, Spector ND, Srivastava R, et al. I-PASS, a mnemonic to standardize verbal handoffs. *Pediatrics*. 2012;129(2):201-204. https://ipassinstitute.com/wp-content/uploads/2016/06/I-PASS-mnemonic.pdf. 2019. ● Haig KM, Sutton S, Whittington J. SBAR: a shared mental model for improving communication between clinicians. *Jt Comm J Qual Patient Saf*. 2006;32(3)167-175. https://www.ncbi.nlm.nih.gov/pubmed/16617948. 2019.

In an effort to aid programs in the transition to using the new version of the Milestones, we have mapped the original Milestones 1.0 to the new Milestones 2.0. Below we have indicated where the subcompetencies are similar between versions. These are not necessarily exact matches, but are areas that include some of the same elements. Note that not all subcompetencies map between versions. Inclusion or exclusion of any subcompetency does not change the educational value or impact on curriculum or assessment.

Milestones 1.0	Milestones 2.0
PC1: Cares for acutely ill or injured patients in urgent and emergent situations and in all settings	PC1: Care of the Acutely Ill patient
PC2: Cares for patients with chronic conditions	PC2: Care of Patients with Chronic Illness
PC3: Partners with the patient, family, and community to improve health through disease prevention and health promotion	PC3: Health Promotion and Wellness
PC4: Partners with the patient to address issues of ongoing signs, symptoms, or health concerns that remain over time without clear diagnosis despite evaluation and treatment, in a patient-centered, cost-effective manner	PC4: Ongoing Care of Patients with Undifferentiated Signs, Symptoms, or Health Concerns
PC5: Performs specialty-appropriate procedures to meet the health care needs of individual patients, families, and communities, and is knowledgeable about procedures performed by other specialists to guide their patients' care	PC5: Management of Procedural Care
MK1: Demonstrates medical knowledge of sufficient breadth and depth to practice family medicine	MK1: Demonstrates Medical Knowledge of Sufficient Breadth and Depth to Practice Family Medicine
MK2: Applies critical thinking skills in patient care	MK2: Critical Thinking and Decision Making
No match	
SBP1: Provides cost-conscious medical care	SBP3: Physician Role in Health Care Systems
SBP2: Emphasizes patient safety	SBP1: Patient Safety and Quality Improvement
SPB3: Advocates for individual and community health	SBP4: Advocacy
SBP4: Coordinates team-based care	SBP2: System Navigation for Patient-Centered Care
PBLI1: Locates, appraises, and assimilates evidence from scientific studies related to the patients' health problems	PBLI1: Evidence-Based and Informed Practice
PBLI2: Demonstrates self-directed learning	PBLI2: Reflective Practice and Commitment to Personal Growth
PBLI3: Improves systems in which the physician provides care	SBP1: Patient Safety and Quality Improvement SBP3: Physician Role in Health Care Systems
PROF1: Completes a process of professionalization	

PROF2: Demonstrates professional conduct and accountability	PROF1: Professional Behavior and Ethical Principles PROF2: Accountability/ Conscientiousness
PROF3: Demonstrates humanism and cultural proficiency	PROF1: Professional Behavior and Ethical Principles ICS2: Interprofessional and Team Communication
PROF4: Maintains emotional, physical, and mental health; and pursues continual personal and professional growth	PROF3: Self-Awareness and Help Seeking
ICS1: Develops meaningful, therapeutic relationships with patients and families	ICS1: Patient and Family-Centered Communication
ICS2: Communicates effectively with patients, families, and the public	ICS1: Patient and Family-Centered Communication
ICS3: Develops relationships and effectively communicates with physicians, other health professionals, and health care teams	ICS2: Interprofessional and Team Communication
ICS4: Utilizes technology to optimize communication	ICS3: Communication within Health Care Systems

Available Milestones Resources

Milestones 2.0: Assessment, Implementation, and Clinical Competency Committees Supplement, 2021 - *https://meridian.allenpress.com/jgme/issue/13/2s*

Milestones Guidebooks: https://www.acgme.org/milestones/resources/

- *Assessment Guidebook*
- *Clinical Competency Committee Guidebook*
- *Clinical Competency Committee Guidebook Executive Summaries*
- *Implementation Guidebook*
- *Milestones Guidebook*

Milestones Guidebook for Residents and Fellows: https://www.acgme.org/residents-and-fellows/the-acgme-for-residents-and-fellows/

- Milestones Guidebook for Residents and Fellows
- Milestones Guidebook for Residents and Fellows Presentation
- Milestones 2.0 Guide Sheet for Residents and Fellows

Milestones Research and Reports: https://www.acgme.org/milestones/research/

- *Milestones National Report*, updated each fall
- *Milestones Predictive Probability Report,* updated each fall
- *Milestones Bibliography*, updated twice each year

Developing Faculty Competencies in Assessment courses - https://www.acgme.org/meetings-and-educational-activities/courses-and-workshops/developing-faculty-competencies-in-assessment/

Assessment Tool: Direct Observation of Clinical Care (DOCC) - https://dl.acgme.org/pages/assessment

Assessment Tool: Teamwork Effectiveness Assessment Module (TEAM) - https://team.acgme.org/

Improving Assessment Using Direct Observation Toolkit - https://dl.acgme.org/pages/acgme-faculty-development-toolkit-improving-assessment-using-direct-observation

Remediation Toolkit - https://dl.acgme.org/courses/acgme-remediation-toolkit

Learn at ACGME has several courses on Assessment and Milestones - https://dl.acgme.org/